

Remarks

Claim 1 has been amended to define the invention more clearly. The first and second heating element, portions are clearly stated to be integrally formed from a continuous heating element and to extend generally circumferentially of the heater in the region of connection.

That the heating element portions are integrally formed from a continuous heating element is apparent from the drawings, as well as from the specification at page 13, lines 4-5, and page 23, lines 11-18. That the first and second heating element portions extend generally circumferentially of the heater in the region of connection is clear from the drawings as well as from the specification, as filed, in the passages at page 12, lines 16-22, page 13, lines 15-20, and page 13, line 22, to page 14, line 14.

Former claim 5 has been rewritten as claim 27 to include all the limitations of former claim 1 and intervening claim 4. Claims 5, 6, 7, 8 and 13 have been renumbered to be dependent on new claim 27.

Former claim 18 has been rewritten as claim 28 to include all the limitations of former claim 1 and intervening claims 3 and 17. Claim 19 has been amended to be dependent on new claim 28.

Former claim 22 has been rewritten as new claim 29 to include all the limitations of former claim 1 and intervening claim 21. Claims 23, 24 and 25 have been amended to be dependent on new claim 29.

No Claim is Anticipated

Claims 1-4 and 21 stand rejected under 35 U.S.C. 102(b), as being anticipated by Scott (US 5,977,523).

Scott discloses a radiant electric heater in which, according to column 4 lines 36-47, a first electrical heating element 3 and a second electrical heating element 4 may be of corrugated ribbon form or coiled wire form, or one or both of the elements could comprise a halogen lamp. Scott specifically states that the heating elements 3 and 4 need not both be of the same form.

There is no teaching and no suggestion in Scott that the heating elements should be integrally formed from a continuous heating element, as required by amended claim 1. Indeed, Scott clearly teaches that the heating elements can be of different forms, and in such a case could not therefore be integrally formed from a continuous heating element.

In any event, where the heating elements 3 and 4 are connected to a common terminal of terminal block 8, in Figures 1 and 4 of Scott, it is clearly apparent that the heating element undergoes a sharp reversal of direction. Consequently, there is no teaching and no suggestion in Scott that the heating element portions should extend generally circumferentially of the heater in the region of connection, as is also required by amended claim 1.

Clearly, amended claim 1 is not anticipated by Scott. It follows that none of claims 2-4 or 21 can properly be deemed anticipated by the reference.

Claims 1, 2, 4 and 21 stand rejected under 35 U.S.C. 102(b), as being anticipated by Higgins (US 5,892,206).

It is acknowledged that Higgins discloses, at column 1, lines 54-59, that the two heating elements 6 and 10 can be in the form of a single element having a tapping point for electrical connection at the terminal 7.

However, where the heating elements 6 and 10 are connected to a common terminal 7 of the terminal block in Figures 1A and 4A of Higgins, it is clearly apparent that the heating element undergoes a sharp reversal of direction. Consequently, there is no teaching and no suggestion in Higgins that the heating element portions should extend generally circumferentially of the heater in the region of connection, as required by amended claim 1.

Clearly, amended claim 1 is not anticipated by Higgins. It follows that none of claims 2, 4 or 21 can properly be deemed anticipated by the reference.

No Claim is Obvious

Albeit no claim has been rejected as obvious over either Scott alone or Higgins alone, it is clear that such rejections would be without merit. In addition to the remarks made above, it should be noted that neither Scott nor Higgins teaches that a heating element could or should be inserted into the heater in a manner that avoids small radius bends, in order to facilitate automatic insertion of the integral first and second heating element portions, as explained for example at page 13, lines 15-20, of

the instant specification. Indeed, both Scott and Higgins show numerous sharp reversals of the heating element, and therefore lead the person skilled in the art away from the instant invention.

Claim 17 stands rejected under 35 U.S.C. 103 (a) as being unpatentable over Scott (US 5,977,523) in view of Goessler et al. (US4,511,789) or Challet (US 2,330,867).

It is accepted that the connection of heating elements in parallel is known from each of Goessler et al and Challet. However, claim 17 is considered to be patentable for the reasons given above in respect of amended claim 1.

A check in the amount of \$650 is enclosed to cover the presentation here of one independent claim in excess of three and nine total claims in excess of 20.

In view of the foregoing, it is respectfully submitted that all claims of the application define an invention that is novel and patentable over the prior art.

Withdrawal of the rejections, and passage of the application to full allowance, are believed to be clearly in order; such actions are earnestly solicited.

Respectfully submitted,
GEORGE ANTHONY HIGGINS ET AL.

By: 

Ira S. Dorman
Attorney for Applicants
Reg. No. 24,469
Tel: (860) 528-0772